

Date: Friday, 09/01/2009 12:43:58 PM
 User: Jean-Luc Menard

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: BLADE FITTING
Job Number	: 44531 <i>2</i>	Part Number	: D3488042
Estimate Number	: 12300	Drawing Number	: D3488 / DSK101
P.O. Number	:	Project Number	: N/A
This Issue	: 09/01/2009 S.O. No. :	Drawing Revision	: B / D
Prsht Rev.	: NC	Material	:
First Issue	: 1 /	Due Date	: 16/01/2009
Previous Run	: 43122	Qty:	<i>3</i> / 17 Um: Each
Written By	: <i>JLM 09-01-09</i>		
Checked & Approved By	:		
Comment	Est Rev:A New Issue 06-02-28 JLM Est Rev:B As per Rev B 06-03-30 JLM Est Rev:C Now On Doosan Lathe JLM Verified BY:DD		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D6103003	Round Billet, Aluminum
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 17.0000 Each(s)

Alluminum Round Billet D6103-003

Batch:

42281 x 11 x 2
41968 (1) x 2

RF 07/01/10

2.0	DOOSAN LATHE	DOOSAN LATHE
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Comment: DOOSAN CNC LATHE

1-Turn as per Dwg DSK 101 & Folio FA627

2-Deburr

RF 09/01/10

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
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Comment: INSPECT PARTS AS THEY COME OFF MACHINE

RF 09/01/10

4.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
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Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine as per Folio FA627 & Dwg D3488

2-Deburr

M.A 09/01/17

5.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

M.A 09/01/17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3488-042 PAR #: N/A Fault Category: Prod/Machined Parts NCR: Yes No DQA: A Date: 09/02/12
 Resolution: Rework Disposition: Rework QA: N/C Closed: D Date: 09/02/13

NCR: <u>44531-2</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
9/1/12	# 2.0	During machining it was found that the blade R.H. has chatter in side the 2.150" Bore. Qty <u>23</u>	RF QSI 042 09.01.14	During attempts to remove chatter more chatter occurred	RF 09.01.14	S 09/01/29	RF QSI 042	RF 09-01-29
				- 1 drill has chatter left in the inside bore.	RF 09-01-29	S 09/01/29	RF QSI 042	RF 09-01-29
		RC chatter from chips on Drill.	RF QSI 042	- Acceptable - Buff	RF 09-01-29	S 09/01/29	RF QSI 042	RF 09-01-29
		Process		- Buildout marks is possible.	RF 09-01-29	S 09/01/29	RF QSI 042	RF 09-01-29

NOTE: Date & initial all entries

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE FITTING

Job Number: 44531

Part Number: D3488042

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC8

SECOND CHECK



Comment: SECOND CHECK

mk 09/02/05

(3)

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

FL 09/02/06

(3)

8.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

MB9996

START TIME:

8:00

OVEN TEMPERATURE:

320°

FINISH TIME:

8:30

BR 09-02-10

(5)

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

09-02-10

(X3)

10.0

ALS71032225

INSERT



Comment: Qty.: 4.0000 Each(s)/Unit Total: 68.0000 Each(s)

Pick:

Qty Part Number Description Batch

4 ALS7-1032-225 Insert *M1109817*

8/1

11.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Install Inserts as per Dwg D3488

9/1 09-02-10

(X3)

12.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

5 09/02/10 (2)

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE FITTING

Job Number: 44531

Part Number: D3488042

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: FP-8

JB

09-02-10

(XS)

14.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

09/02/12

Job Completion



mk
09-02-12

DART AEROSPACE LTD	Work Order:	44531
Description: Blade Fitting, RH / Turning Detail for D3488-1/-2	Part Number:	D3488-2
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

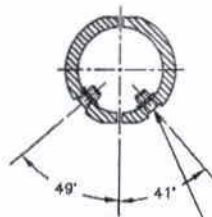
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
Ø2.150	+/-0.005	2.150				
Ø2.780	+/-0.005	2.780				
Ø3.125	+/-0.010	3.125				
Ø3.346	+/-0.010	3.346				
0.125 x 45°	+/-0.010 x +/-0.1°	.125 x 45°				
8.000	+0.030/-0.000	8.000				
9.250	+/-0.010	9.250				
0.188	+/-0.010	.188				
R0.032	+/-0.010	R0.032				
R0.062	+/-0.010	R0.062				
Ø0.297	+0.005/-0.001	.297				
Ø0.430	+/-0.010	.430				
0.100	+/-0.010	.100				
0.125	+/-0.010	.125				
2.620	+/-0.010	2.620				
3.500	+/-0.010	3.500				
1.005	+/-0.010	1.005				
Ø0.484	+0.005/-0.001	.485				
1.180	+/-0.010	1.180				
3.150	+/-0.010	3.150				
3.070	+/-0.010	3.070				
R0.063	+/-0.010	R0.063				
	09/01/12			Audit:		

DART AEROSPACE LTD		Work Order: 44531
Description: Blade Fitting, RH / Turning Detail for D3488-1/-2		Part Number: D3488-2
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 2 of 2

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Milling Section						
Ø0.508	+0.006/-0.001	Ø 0.510	✓			
0.750	+/-0.010	0.750	✓			
1.500	+/-0.010	1.500	✓			
11.18	+/-0.030	11.184	✓			
R0.062	+/-0.010	R0.062	✓			
0.125	+/-0.010	0.130	✓			
0.590	+/-0.010	0.590	✓			
0.793	+/-0.010	0.793	✓			
1.351	+/-0.010	1.351	✓			
1.317	+/-0.010	1.318	✓			
1.802	+/-0.010	1.799	✓			

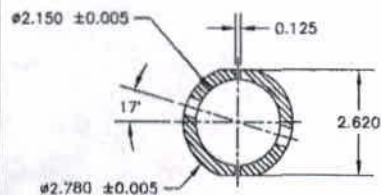
Measured by: H.A	Audited by: JML	Prototype Approval: N/A
Date: 09/01/17	Date: 02/02/05	Date: N/A

Rev	Date	Change	Revised by	Approved
A	06.03.31	New Issue	KJ/JLM	
B	08.09.19	Reformat P/O D3488-042	KJ/JLM	
C	08.12.02	Dimension 8.000 removed	KJ/JLM	



SECTION B-B

Ø0.297
C'BORE Ø0.430 x 0.100
INSTALL ALS4-1032-225 (OR AKS4-1032-225
OR ALS7-1032-225 OR AKS7-1032-225)
INSERTS AFTER FINISH
(4 PLACES)



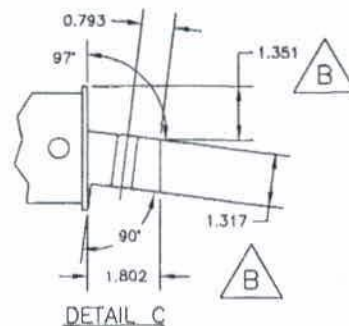
SECTION A-A

D3488-041/-042 BLADE FITTING ASSEMBLY PARTS LIST

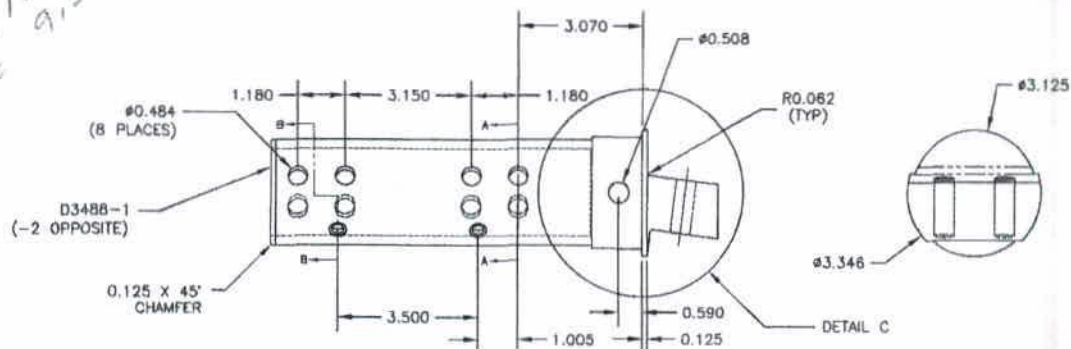
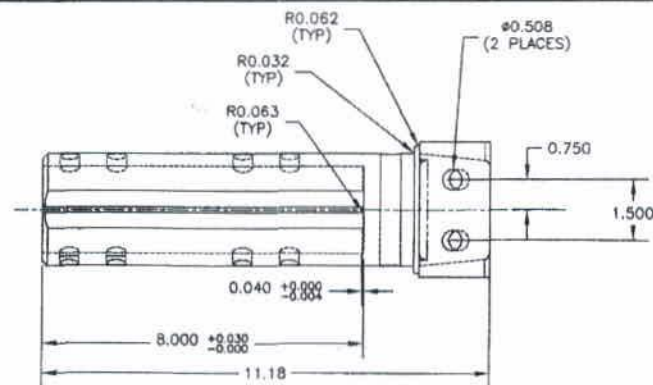
QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X	X	D3488-041	BLADE FITTING ASSEMBLY (LH)
		D3488-042	BLADE FITTING ASSEMBLY (RH)
1		D3488-1	BLADE FITTING (LH)
	1	D3488-2	BLADE FITTING (RH)
4	4	ALS4-1032-225 or AKS4-1032-225 or ALS7-1032-225 or AKS7-1032-225	INSERT

D3488-041/-042 BLADE FITTING

- MATERIAL: MAKE D3488-1/-2 FROM ALUMINUM 7075-T7351 ROUND BAR PER QQ-A-225/9 (REF. DART MATERIAL SPEC M7075T73R)
- FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- INSTALL INSERTS AFTER POWDER COAT
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



DETAIL C



D3488-041 SHOWN (D3488-042 OPPOSITE)

RELEASED
06.03.15 PH
PER D3
ECN #789

B	06.03.15	CHANGE THICKNESS
A	05.12.20	NEW ISSUE
DESIGN	PH	DRAWN BY PH
CHECKED	PH	APPROVED PH
DATE	06.03.15	TITLE
		BLADE FITTING

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DART DART AEROSPACE USA, INC.
PORT HADLOCK, VA

DRAWING NO. D3488
REV. B
SHEET 1 OF 1

SCALE
1:3